



Hi-Phone *DeskTop*TM USB H/W User Manual

1.08.08

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1. Introduction

Way2call™ solutions are ideal for customized development. System integrators, solution providers and OEMs can customize their solution to a wide variety of market applications such as converged IP and PSTN call centers, SOHO communication solutions (i.e., medical and law offices, insurance companies, etc.), IP-PBX systems, on-line service providers, and more.

A Software Development Kit (SDK) is also available for easy entering the world of CTI (Computer Telephony Integration) and VoIP (Voice over Internet Protocol). The SDK includes detailed documentation on the Hi-Phone *DeskTop*™ USB APIs together with sample codes that can be freely used.

This document was designed to assist you with installing and using the Hi-Phone *DeskTop*™ USB product.

Please check the Hi-Phone *DeskTop*™ USB Frequently Asked Questions (FAQs), section 5, for some more information on the device.


1.1 Using This Document

This Document can be used for integrating existing or new applications with Way2call's Hi-Phone *DeskTop*™ USB devices.

Way2call Communication Ltd. reserves the right to make changes to the Hi-Phone *DeskTop*™ USB devices and to the content of this document without notice.

1.1.1 Symbols

The following words and symbols mark special messages throughout this guide:


	NOTE:	Text set off in this manner presents commentary or interesting points of information.
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	Important:	Text set off in this manner presents clarifying information or specific instructions.
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1.1.2 Serial Number

When requesting information or support, provide the Hi-Phone *DeskTop*™ USB device serial number. The serial number is located on the bottom of the device.

1.1.3 Locating Additional Information

The Hi-Phone *DeskTop*™ USB device comes with various drivers as described in this guide. To identify what versions you are using, right click the Hi-Phone®  icon in the Task Bar and a pop-up menu will appear. Select **About** (see Figure 1).

The about screen will display (see Figure 2), letting you collect all the needed information about the device (hardware and drivers).

	NOTE:	The Hi-Phone® icon will show in the Task Bar only after installing the drivers (see section 3).
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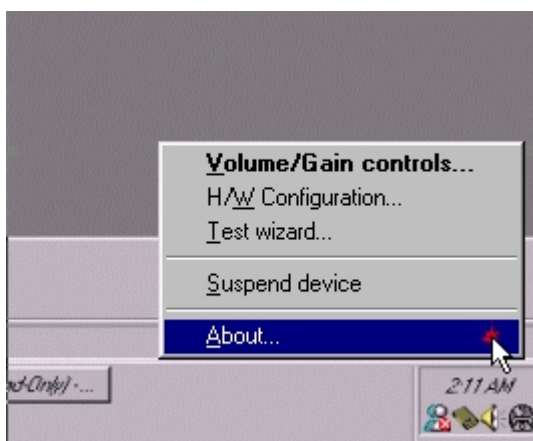


Figure 1 - About the Hi-Phone® device and drivers

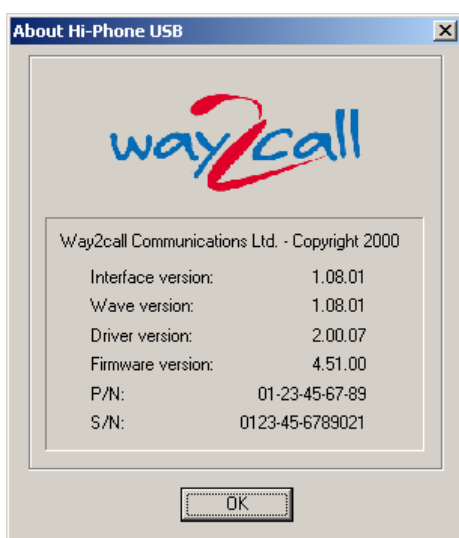


Figure 2 - About screen

1.2 Hi-Phone *DeskTop*™ USB Features

- Connects any telephone set and/or a phone line to the computer. Enables you to send/receive voice streams (8KHz, mu-Law/a-Law or PCM WAVE data) to/from both
- Local Echo-suppression of voice sent to the handset/line
- Telephone handset on/off hook detection
- Telephone set keypad keys press & release detection
- Telephone set Hook-Flash detection
- Telephone set Ringer activation
- Phone line dialing/answering – open/close the line, dial DTMF digits, call-progress analysis including voice energy presence, Current Loop Drop detection, Silent Detection, and SIT
- Remote party (incoming) DTMF detection
- Incoming calls (RING signal) detection
- CID (Caller ID) and CIDCW (Caller ID on Call Waiting) data

2. Before you start

2.1 What's in the package

- One Hi-Phone *DeskTop*™ USB device
- A RJ-11 phone cord for connecting the device to your telephone set
- A USB cable to connect the device to your USB Port
- A 12V DC power adapter¹
- A Quick Reference Guide
- User License Agreement
- Installation CD that includes "**Hi-Phone® Drivers**" including all the various drivers (i.e., **WAVE, TAPI, DLL, ActiveX, and low level drivers**) needed to use the device. Also included is this User Manual (PDF format).

2.2 System Requirements

- Pentium 233 Processor or Higher
- Windows® 98, 98 SE, ME, 2000, or XP
- 4 MB Free Hard Disk Space
- Available USB port
- An Analog Telephone set² (optional)
- A suitable headset³ (optional)
- An analog telephone line⁴ (POTS) or an analog extension of a PBX.

¹ The current version of the Hi-Phone *DeskTop*™ USB devices requires an AC adapter. Future devices will use the USB power. If you are not sure to the type of device you have, please contact Way2call's Support Team at <http://www.way2call.com/srf.htm>.

² An analog telephone is any phone that works on your regular analog line (see footnote #4 below). It could be based on digital technology, e.g., a telephone with Caller-ID display, a telephone with an answering machine, 2.4 GHz Cordless phone, etc.

³ A standard headset with RJ-11 or a 2.5" Phone connector can be used with the Hi-Phone *DeskTop*™ USB device.

⁴ Analog line can be one of the followings: A standard line from your Telco (Telephone Company), a standard extension from your PBX, a Centrex connection, etc. It cannot be a digital PBX extension (usually 4 wires), ISDN, or any other digital connection.

3. Installation

This section describes the installation process.

3.1 Installing the hardware

3.1.1 Preparing for installation

- a. Make sure that you are using an analog phone and line (see section 2.2 - System Requirements).



NOTE:

In some countries (e.g., UK, Germany), an external adapter for the phone and line might be required. Please check whether your local telephony connection standards default to the US.

- b. Close all applications.
- c. For installing the Hi-Phone *DeskTop*™ USB model, leave the computer running and continue at section 3.1.2.

3.1.2 Connecting the Hi-Phone *DeskTop*™ USB Model



Important:

Do not connect the Hi-Phone *DeskTop*™ device to your PC until completing section 3.1.2.1.

3.1.2.1 Copying INF files for easy Plug & Play Installation



Important:

For installing with Windows 2000 and XP, you should be logged on with Administrator privileges.

- a. If not done at this time, insert the Hi-Phone® setup CD into the drive now. The **Hi-Phone Setup CD** dialog box will appear.
- b. If the Hi-Phone® Setup CD dialog Box does not appear, double click the **My Computer** icon and then double click the **CD-ROM** icon to run the **Setup.exe** file.
- c. In the Hi-Phone® Setup CD dialog box, select: **Prepare Windows for easy USB installation** (see Figure 3).
- d. Follow the on screen instructions.
- e. For use with a computer modem skip to section 3.1.2.2, otherwise skip to section 3.1.2.3.



Figure 3 - Copy INF files for easy USB device installation

3.1.2.2 Connecting the Hi-Phone DeskTop™ USB with a computers modem

- If connected, disconnect the telephone cable from the modem telephone port marked **PHONE** at the back of the computer.
- Connect the telephone cord to the Hi-Phone DeskTop™ USB port marked **PHONE** at the rear of the unit (See Item B in Figure 4, Figure 5, and Figure 6).

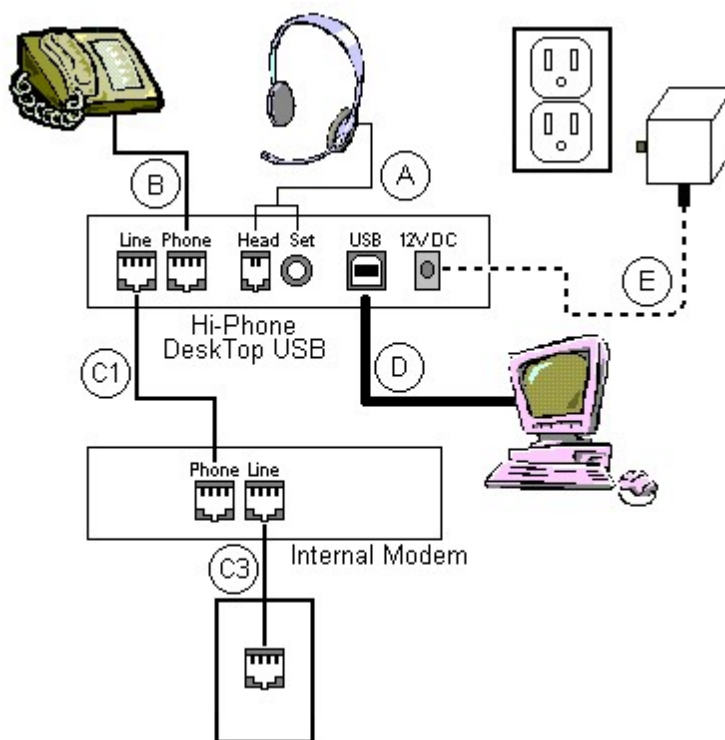


Figure 4 – Connecting Hi-Phone DeskTop™ USB with internal modem

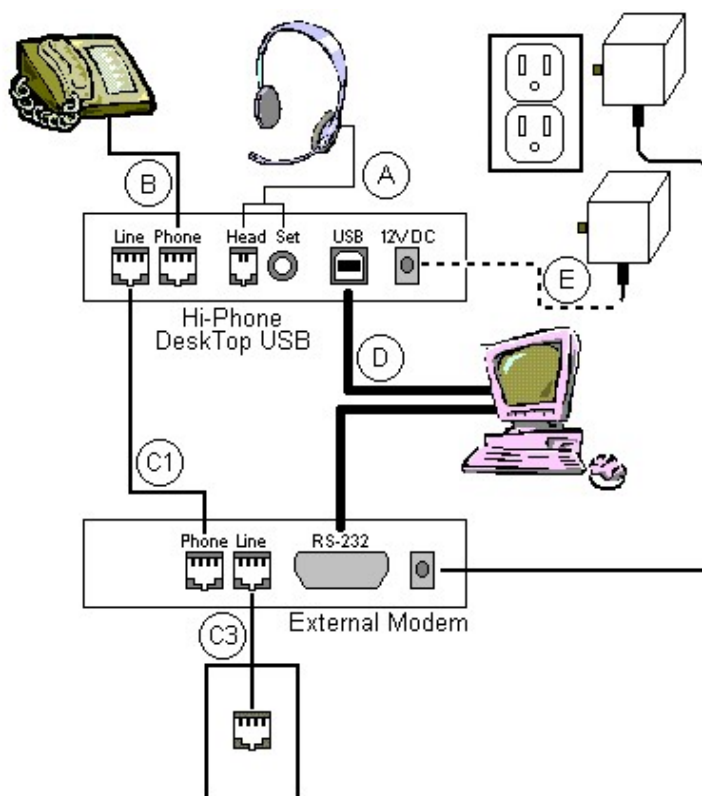


Figure 5 – Connecting Hi-Phone *DeskTop™* USB with external modem

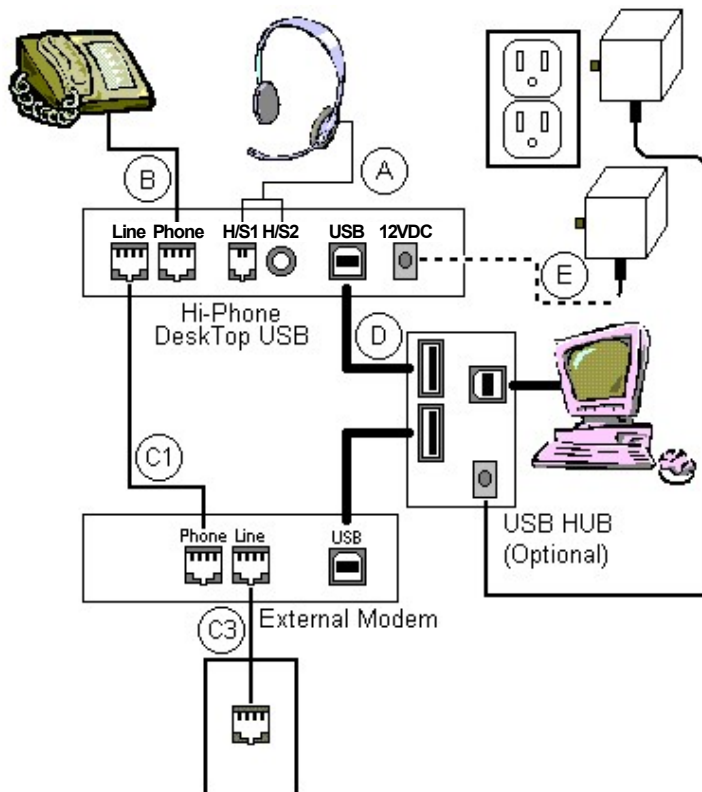


Figure 6 – Connecting Hi-Phone *DeskTop™* USB with a USB HUB and modem

- c. Using the supplied telephone cord, connect the modem port marked **PHONE** to the port marked **LINE** at the rear of the Hi-Phone *DeskTop*™ USB (See Item C1 in Figure 4, Figure 5, and Figure 6).



NOTE: The computer's modem must be connected to the telephone wall jack (See Item C3 in Figure 4, Figure 5, and Figure 6).

- d. Connect the AC Adapter⁵ 12VDC / 500mA Power supply unit to the port marked **12VDC** at the rear of the Hi-Phone *DeskTop*™ USB (See Item E in Figure 4, Figure 5, and Figure 6) and then plug it into the AC socket.



NOTE: When using a HUB, the power supplied by the PC's USB might **not** be sufficient and an AC Adapter would be needed.



Important: When used, connect the AC Adapter unit to the Hi-Phone *DeskTop*™ USB BEFORE plugging it into the wall socket.

- e. Connect a Head Set (Optional) to one of the ports at the rear of the Hi-Phone *DeskTop*™ marked **H/S1** or **H/S2** (See Item A in Figure 4, Figure 5, and Figure 6).
- f. Connect the **USB** port in the Hi-Phone *DeskTop*™ USB to an available USB port (located at the rear of the computer) using the supplied USB cable (See Item D in Figure 4 and Figure 5). If your computer's USB port is not free, a USB HUB can be used (See Figure 6).
- g. For first time hardware installation, proceed to Plug & Play Device Driver Installation, section 3.2. Otherwise, skip to Software Installation in section 3.3.

3.1.2.3 Connecting the Hi-Phone *DeskTop*™ with **NO** computer modem

- a. Connect the telephone cord to the Hi-Phone *DeskTop*™ USB port marked **PHONE** at the rear of the unit (See Item B in Figure 7).
- b. Using the supplied telephone cord, connect the rear of the Hi-Phone *DeskTop*™ USB marked **LINE** to the telephone wall jack (See Item C2 in Figure 7).
- c. Connect the AC Adapter⁵ 12VDC / 500mA Power supply unit to the port marked **12VDC** at the rear of the Hi-Phone *DeskTop*™ USB (See Item E in Figure 7) and then plug it into the AC socket.



NOTE: When using a HUB, the power supplied by the PC's USB might **not** be sufficient and an AC Adapter would be needed.



Important: When used, connect the AC Adapter unit to the Hi-Phone *DeskTop*™ BEFORE plugging it into the wall socket.

⁵ The current version of the Hi-Phone *DeskTop*™ USB devices requires an AC adapter. Future devices will use the USB power. If you are not sure to the type of device you have, please contact Way2call's Support Team at <http://www.way2call.com/srf.htm>.

- d. Connect a Head Set (Optional) to one of the ports at the rear of the Hi-Phone DeskTop™ marked **H/S1** or **H/S2** (See Item A in Figure 7).
- e. Connect the **USB** port in the Hi-Phone DeskTop™ USB to an available USB port (located at the rear of the computer) using the supplied USB cable (See Item D in Figure 7). If your computer's USB port is not free, a USB HUB can be used (See Figure 6).
- f. For first time hardware installation, proceed to Plug & Play Device Driver Installation, section 3.2. Otherwise, skip to Software Installation in section 3.3.

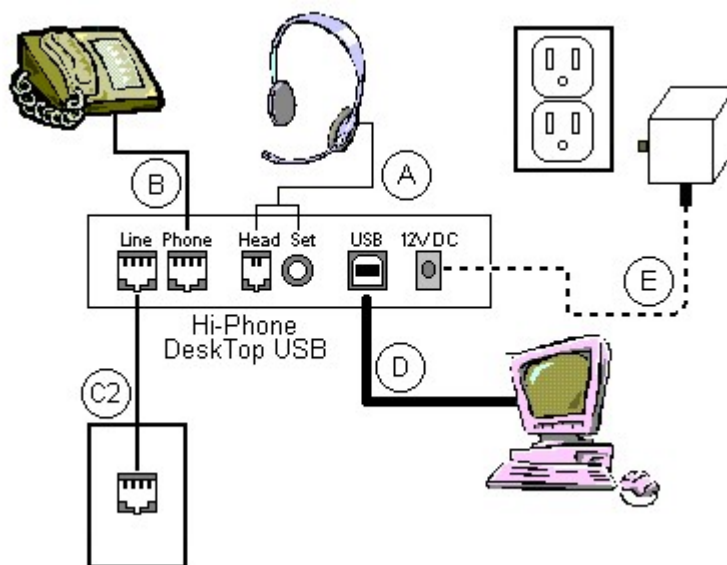


Figure 7 - Connecting Hi-Phone DeskTop™ USB with no modem

3.2 Plug & Play Device Driver Installation

For first time installation of your Hi-Phone DeskTop™ device, the Plug & Play mechanism of the operating system will recognize that new hardware has been installed. Follow these steps for installing the Plug & Play device drivers.

3.2.1 Windows 98, 98 SE, and Me

- a. If section 3.1.2.1 was successfully completed, then as soon as you plug in the USB cable into your PC, a message stating that "new hardware has been located" is displayed (see Figure 8 for an example screen) followed by Windows automatically adding the required device drivers.

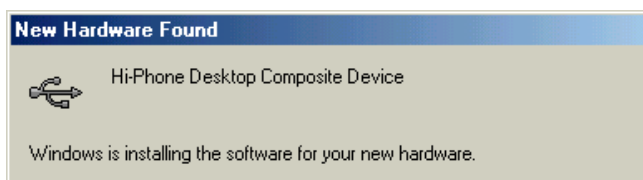


Figure 8 - New Hardware Found



NOTE:

If AUTOMATIC Device Driver installation fails, try rebooting the computer and reconnecting the USB cable after boot.

- b. Windows will install the following device drivers: "Hi-Phone DeskTop Composite Device", "Way2call Hi-Phone DeskTop HID", "Hi-Phone desktop USB", and "Hi-Phone desktop USB Aux".

**Important:**

Windows will detect and install these device drivers one-by-one.

This process might take couple of minutes, depending on the type of machine you are using.

- c. Upon completion, to see if the Plug & Play device drivers had been successfully installed, using the mouse, right click on **My Computer**. Then select the **Device Manager** tab and look for the four device drivers: "Way2call Hi-Phone DeskTop HID", "Hi-Phone desktop USB", "Hi-Phone desktop USB Aux", and "Hi-Phone DeskTop Composite Device" (as seen in Figure 9).

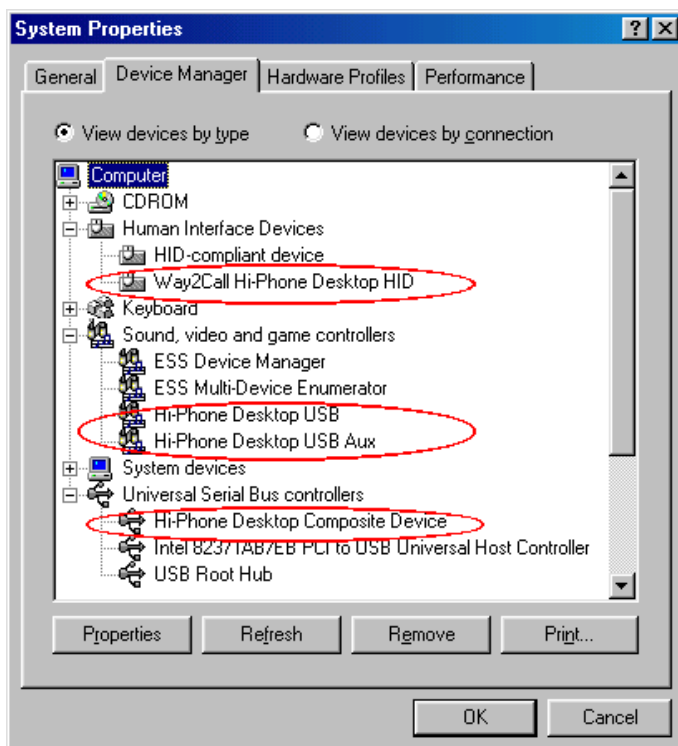


Figure 9 - Windows 98 Device Manager

- d. Continue on to Software Installation in section 3.3.

3.2.2 Windows 2000 and XP



Important: For installing with Windows 2000 and XP, you should be logged on with Administrator privileges.

- a. If section 3.1.2.1 was successfully completed, then as soon as you plug in the USB cable into your PC, a message stating that "new hardware has been located" is displayed (see Figure 8 for an example screen) followed by Windows automatically adding the required device drivers.
- b. Windows will install the following device drivers: "Hi-Phone DeskTop Composite Device", "Way2call Hi-Phone DeskTop HID", "Hi-Phone desktop USB", and "Hi-Phone desktop USB Aux".
- c. After each device driver is installed, a warning message might display. This message warns of an issue with the file digital signature (see Figure 10). Click the **Yes** button to confirm and continue the installation with all the above device drivers.



Important: Windows will detect and install these device drivers one-by-one. This process might take couple of minutes, depending on the type of machine you are using.



Figure 10 - Digital Signature Not Found Warning

- d. Upon completion, to see if the Plug & Play device drivers had been successfully installed, using the mouse, right click on **My Computer**. Then select **Manage**. From the list select **Device Manager** and look for the four device drivers: "Way2call Hi-Phone DeskTop HID", "Hi-Phone desktop USB", "Hi-Phone desktop USB Aux", and "Hi-Phone DeskTop Composite Device" (as seen in Figure 11).

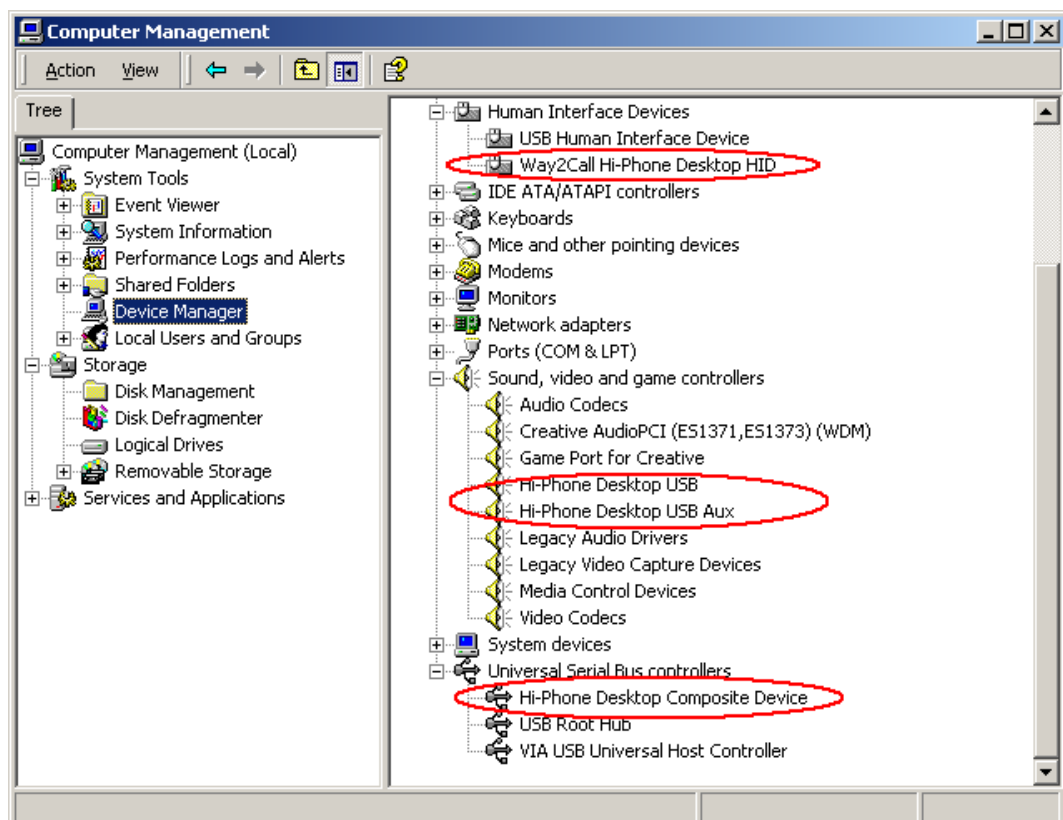


Figure 11 - Windows 2000 Device Manager

- e. Continue on to Software Installation in section 3.3.

3.3 Software Installation

3.3.1 Installing the drivers



Important: For installing with Windows 2000 or XP, you should be logged on with Administrator privileges.



NOTE: Before installation, it is recommended to close all applications.

- If not done at this time, insert the install CD into the drive now. The **Hi-Phone Setup CD** dialog box will appear.
- If the Hi-Phone® Setup CD dialog Box does not appear, double click the **My Computer** icon and then double click the **CD-ROM** icon to run the **Setup.exe** file.
- In the Hi-Phone® Setup CD dialog box, select **Install Hi-Phone USB S/W and Drivers for Windows** (see Figure 12).
- Read the End Users License Agreement form (see Figure 13). To accept and continue, click **Yes**.



Figure 12 - Install Hi-Phone DeskTop™ USB Drivers for Windows

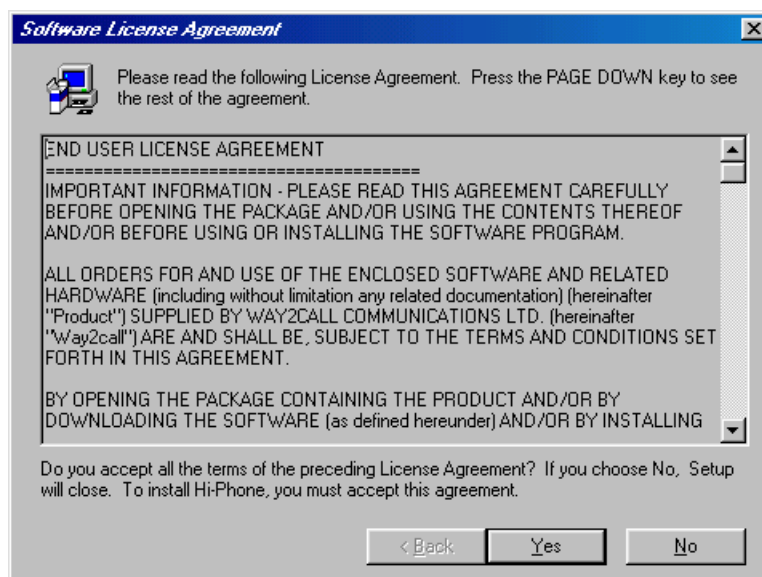


Figure 13 – End User License Agreement Screen

- e. The default destination folder for installed files for Windows 98/ME is C:\Program Files\Hi-Phone. For Windows 2000/XP the default destination folder is C:\Program Files\Hi-Phone2000.
- f. "Hi-Phone" is the default program folder for the application.
- g. Files will now be copied to the computer's hard drive.
- h. The Hardware Configuration operation will try to automatically locate the device (see Figure 14).

**NOTE:**

If, for ANY reason, your device cannot be located, make sure that the Hi-Phone® device is properly installed, and then click *Retry*. If the H/W still cannot be located, click **Cancel** to finish the installation and then refer to section 4.4 - Hardware Configuration.

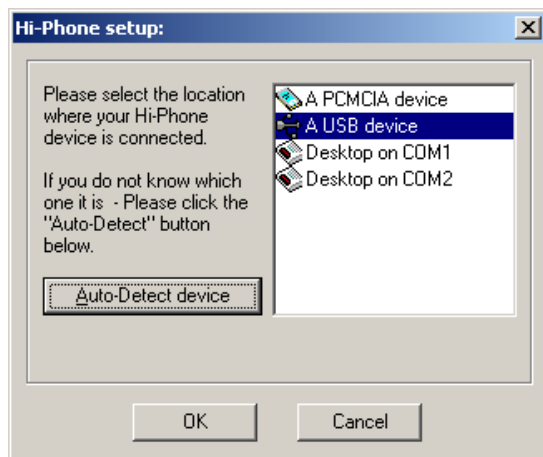


Figure 14 - Hardware device setup

- i. Setup is now complete. To record any changes that may have been made, you must restart the computer now; click Finish (see Figure 15).

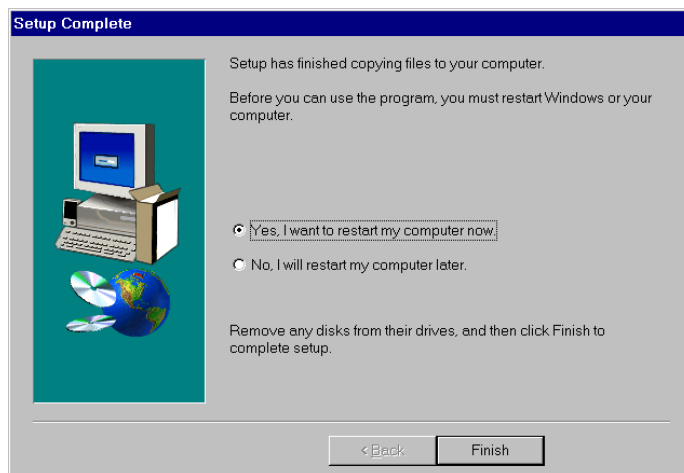



Figure 15 - Final drivers setup screen

3.3.2 Drivers installation wrap-up and test

The *Test Wizard* confirms that the installation has been successfully completed.

- a. Using the mouse, right click on the Hi-Phone®  icon in the Task Bar and a pop-up menu will appear.
- b. Select **Test Wizard**.

- c. Follow the instructions within the *Test Wizard*. If the test is completed successfully, the Hi-Phone DeskTop™ USB device was properly installed onto the PC.

3.4 Installing or Configuring your Application

After successfully completing the installation of the Hi-Phone DeskTop™ USB device (Hardware, Plug & Play Device Drivers, and Windows Drivers), you can now install or configure any application to use the Hi-Phone DeskTop™ USB as its TAPI Service Provider (TSP) device or WAVE (sound) source/target device.

Some application that are already integrated with the Hi-Phone DeskTop™ USB device can be found at the "Cool Links" page in Way2call web site: <http://www.way2call.com/>.

General configuration details can be found in the next section. For TAPI configuration see section 4.3 and for WAVE usage see section 4.1.

For more details on configuring the device with your application, please contact the software manufacturer or you can contact Way2call's Support Team by filling up the Support Request Form at: <http://www.way2call.com/srf.htm>.

3.5 Uninstalling

3.5.1 Uninstalling the Hi-Phone *DeskTop*™ USB drivers

To remove the Hi-Phone *DeskTop*™ USB drivers follow these steps:

- Go to **Start > Settings > Control Panel**. Double click the **Add/Remove Programs**
- Choose the **Hi-Phone S/W & Drivers** from the Windows "Add / Remove Programs properties" screen (see Figure 16)
- Click the Add/Remove button
- Follow the instruction on screen.

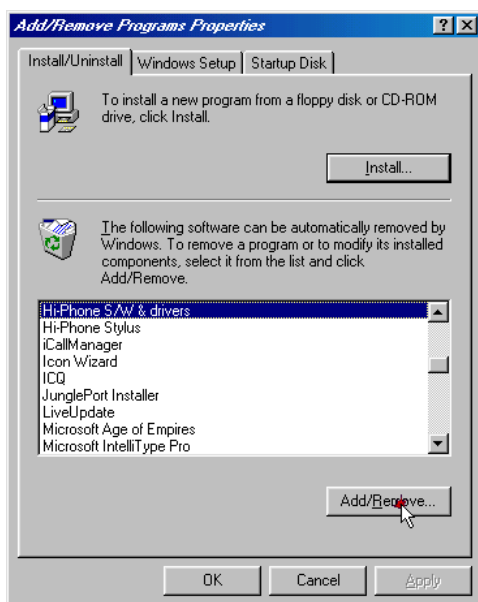


Figure 16 - Uninstall drivers

- To remove the Plug & Play device drivers, click **Yes** when asked if you want to do so (see Figure 17). Otherwise, click **No**.

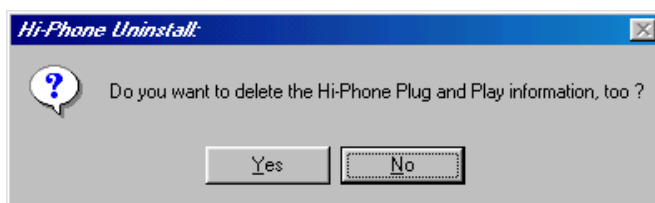


Figure 17 - Confirm removal of Plug & Play driver



NOTE:

With Windows 2000/XP you will need to manually reboot the PC after completing the removal of the software.

4. Notes and Tips

4.1 Using the WAVE driver with other applications

Once you've installed the Hi-Phone *DeskTop™* USB drivers (the wave driver is one of them), you may use the device as a sound card in any application that works with one (e.g., Microsoft NetMeeting). Before you can do so you need to activate the device (turn it ON).

To turn ON the device you will need the Way2call Power ON utility supplied with this CD. The utility does not install with the drivers and you will need to install it separately.





NOTE:

When using the Hi-Phone *DeskTop™* USB as a TAPI Service Provider (TSP) device, this utility is not needed. As soon as the Application (the one that uses the TSP) is started it will turn ON the device (more on TAPI at section 4.3).

To start the tool (and turn ON the device), insert the *Hi-Phone Setup CD* and go to the "\\Installs" folder. Double click the **Turn device ON** icon.


NOTE:

To copy the tool to your hard drive, simply copy the two files (W2Cpower.exe and Turn device ON.lnk located on the CD under the \\Installs directory), to the Hi-Phone folder (recommended).

When you run the Power ON utility, you will see a small icon  added to your taskbar. When you double-click it the Hi-Phone® device will turn ON / OFF. When the Hi-Phone® device is turned on its icon is turned colored  (the ON/OFF tool icon changes from red to green ).

Right click the ON/OFF tool icon to popup a menu enabling ON/OFF (the same as double-click) and selecting between phone and headset (if a headset is plugged in).

After turning the device ON, all you need to do is run your application (e.g., Microsoft NetMeeting) and activate its configuration function (on Microsoft NetMeeting – choose "Tools/Audio Tuning Wizard..."). Then use the dialog-box or wizard displayed to select "**Hi-Phone Wave Driver...**" as your preferred sound card (see Figure 18).

Now you can use your analog telephone set for your Internet calls, voice recording, etc. Just pick up the handset and use it as you would use your sound card with microphone and speakers.



NOTE:

The device has many advanced features, such as: direct dialing of a phone number for an Internet call, ringing the telephone set on incoming calls and answering calls by picking up the handset. To enable these features you will need to purchase the Hi-Phone *WorldDialer™*. More details on that product and others at Way2call web site: <http://www.way2call.com/>.



Figure 18 - Selecting Hi-Phone® WAVE driver

4.2 Changing WAVE⁶ Volume & Gain

Double click the Hi-Phone®  icon. This will display two slider controls (see Figure 19) that enable you to change the WAVE volume and gain and/or mute its channels. The icon with the speaker controls the volume while the microphone icon controls the gain.



NOTE:

There is also an option for H/W Echo-Canceling. DO NOT change this option without consulting Customer Support

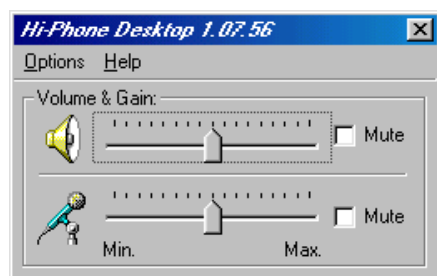


Figure 19 - Volume and Gain Control

4.3 Using the TAPI driver

To use the TAPI driver, use any TAPI enabled application (e.g., Goldmine, Microsoft Outlook, Symantec ACT, etc.), and select the **"Hi-Phone device"** in its *"Line Device"* setup (see Figure 20).

⁶ The Volume and Gain controls have no effect on a regular call (Telephone set or Headset) Volume and Gain.

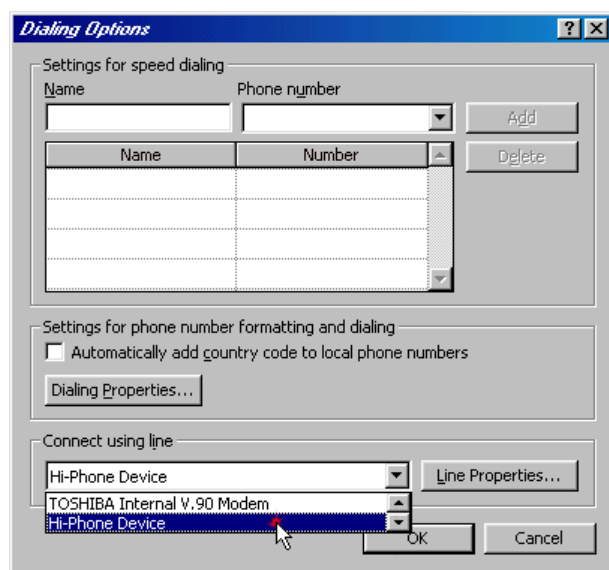


Figure 20 - Selecting Hi-Phone® as TAPI device

4.4 Hardware Configuration

The *H/W Configuration* feature enables you to select the COM/USB port from a list, or activate automatic scan of all available COM/USB ports to detect the Hi-Phone DeskTop™ device.



- Using the mouse, right click on the Hi-Phone®  icon in the Task Bar and a pop-up menu will appear (see Figure 21).
- Select **H/W Configuration**. H/W Configuration tool will display (see Figure 14).
- You can both select Auto-Detect device and let the H/W Configuration tool detect the Hi-Phone DeskTop™ USB for you, or manually select the COM/USB port from the list and click **OK**. The latest option is useful for changing a device if you have both the RS-232 and the USB devices installed on a single machine.



Figure 21 - Activating the Hi-Phone® options menu

4.5 Test Wizard

The *Test Wizard* confirms that the Hi-Phone® device is properly installed and functioning well.

- a. Using the mouse, right click on the Hi-Phone®  icon in the Task Bar and a pop-up menu will appear (see Figure 21).
- b. Select **Test Wizard**.
- c. Follow the instructions within the *Test Wizard*. If the test is completed successfully, the Hi-Phone® device was properly installed onto the PC.

5. Frequently Asked Questions

Q: Can I use more than one Hi-Phone *DeskTop*™ USB device on a single computer?

A: No. The current drivers version does not support more than one device per machine. Way2call is working to change that and in the near future a new version of drivers would support this feature.

Q: Can I connect the Hi-Phone *DeskTop*™ USB using a USB/serial adapter?

A: No. This is not supported.

Q: Can I use the RS-232 and the USB Hi-Phone *DeskTop*™ models on the same machine?

A: Both devices can be connected to the same machine but only one can be used at a time. The TAPI and WAVE drivers are the same for both devices.

Q: Can I use my application, designed to work with the RS-232 Hi-Phone *DeskTop*™ model, with the Hi-Phone *DeskTop*™ USB model?

A: Yes. The USB model is backward compatible with the RS-232 model. The USB model has some new features (e.g., Current Loop Drop detection, Silent Detection, and SIT) that will work only if you implement them in your application code.

Q: Where can I get the latest drivers version for Way2call products?

A: At the Downloads page in Way2call web site: <http://www.way2call.com/>.